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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/601,512

06/23/2003

Thauming Kuo

71630

9715

7590

12/14/2006

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EXAMINER

NILAND, PATRICK DENNIS

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Interview Summary

Application No.

10/601,512

Applicant(s)

KUO ET AL.

Examiner

Patrick D. Niland

Art Unit

1714

All participants (applicant, applicant's representative, PTO personnel):

(1) Patrick D. Niland.

(3) \_\_\_\_\_

(2) John Collins.

(4) \_\_\_\_\_

Date of Interview: 06 December 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: See attached proposed claims (not entered).

Claim(s) discussed: all.

Identification of prior art discussed: cited.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

PATRICK D. NILAND  
PRIMARY EXAMINER

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent and Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant argues that Clark requires surfactant and proposes to exclude surfactant from their claims. The examiner notes "Optionally" and "Preferably" of column 9, line 64 and column 10, line 10 respectively, which indicates surfactant is not required by the definitions of these terms. The particle sizes of column 2, line 66 to column 3, line 3 encompass those of the instant claims. The applicant argues that the prior art does not enable one of ordinary skill in the art to make the instantly claimed particle size without surfactant. The examiner's prior knowledge is that the skilled artisans used to use surfactant and/or organic solvent (e.g. column 10, lines 43-45 of Clark) to reduce particle size. The MPEP clearly requires prior art to be enabling to be used as prior art. Thus, there is a legitimate question as to whether the prior art enables the instantly claimed particle sizes without surfactant. This issue will require further consideration and perhaps further evidence. It is the examiner's position, again based on prior knowledge, that where less hydrophobic oil is used, i.e. lower amounts of alkyd, the "preferred" emulsifier would be expected to become less required since there would be less hydrophobic material and therefore lower tendency for the material to separate from water. The ordinary skilled artisan understands this concept at least based on Hydrophile Lipophile Balance (HLB) theory.

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## TELEFACSIMILE TRANSMISSION

DATE:	December 6, 2006	TOTAL PAGES:	8
TO:	Examiner Niland	FAX NO.:	571-273-1121
FROM:	John Collins	OPERATOR:	N. Hover

RE: Proposed Claims for interview; S/N 10/601,512

### MESSAGE

Document(s) transmitted: \_\_\_\_\_

Confirmation copy sent via: ☐ U.S. Mail ☐ Messenger ☐ Overnight Courier

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1. (Currently Amended) An aqueous latex dispersion composition, comprising the emulsion polymerization reaction product of:

(a) about 2 to about ~~[[8]]~~ 15 weight percent, based on the total weight of (a) and (b), of a sulfonated alkyd;

(b) ~~[[92]]~~ about 85 to about 98 weight percent, based on the total weight of (a) and (b), of one or more ethylenically unsaturated monomers; and

(c) a catalytic amount of an initiator for free-radical emulsion polymerization,

wherein components (b) and (c) are fed into an aqueous dispersion of (a) during the emulsion polymerization process,

wherein the reaction mixture of (a), (b) and (c) is essentially free of added stabilizer surfactant.

wherein the average particle size of the aqueous latex dispersion obtained is from about 60 to about 140 nm.

2. (Original) The aqueous latex dispersion according to claim 1, wherein the sulfonated alkyd comprises the polycondensation reaction product of: i. about 10 to about 50 weight percent of one or more of: a glycol or a polyol, ii. about 10 to about 80 weight percent of one or more of: a monobasic fatty acid, a monobasic fatty ester, a naturally occurring oil, or a partially-saponified oil, iii. about 5 to about 40 weight percent of one or more of: a dicarboxylic acid or anhydride or a poly-carboxylic acid or anhydride, and iv. about 5 to about 15 weight percent of one or more of: a sulfomonomer or a sulfomonomer adduct containing at least one sulfomonomer group, wherein the weight percent is based on the weight of the sulfomonomer, wherein the weight percents of (i), (ii), (iii), and (iv) are based on the total weight of (i), (ii), (iii), and (iv).
3. (Canceled)
4. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is from about 70 to about 130 nm.
5. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is less than about 140 nm.
6. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is less than about 130 nm.
7. (Original) The aqueous latex dispersion according to claim 1, wherein the average particle size of the aqueous latex dispersion obtained is less than 110 nm.

8. (Original) The aqueous latex dispersion according to claim 1, wherein the particle size of the aqueous dispersion of the waterborne alkyd is from about 15 to about 50 nm.
9. (Original) The aqueous latex dispersion according to claim 1, wherein the particle size of the aqueous dispersion of the waterborne alkyd is from about 20 to about 40 nm.
10. (Canceled)
11. (Canceled)
12. (Original) The aqueous latex dispersion according to claim 1, wherein the initiator comprises one or more of: hydrogen peroxide, a potassium peroxydisulfate, an ammonium peroxydisulfate, dibenzoyl peroxide, lauryl peroxide, ditertiary butyl peroxide, 2,2'-azobisisobutyronitrile, t-butyl hydroperoxide, or benzoyl peroxide.
13. (Original) The aqueous latex dispersion according to claim 1, wherein the one or more ethylenically unsaturated monomers comprise one or more of: styrene, .alpha.-methyl styrene, vinyl naphthalene, vinyl toluene, chloromethyl styrene, methyl acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, octyl acrylate, octyl methacrylate, glycidyl methacrylate, carbodiimide methacrylate, an alkyl crotonate, vinyl acetate, di-n-butyl maleate, di-octylmaleate, t-butylaminoethyl methacrylate, dimethylaminoethyl methacrylate, diethylaminoethyl methacrylate, N,N-dimethylaminopropyl methacrylamide, 2-t-butylaminoethyl methacrylate, N,N-dimethylaminoethyl acrylate, N-(2-methacryloyloxy-ethyl-)ethylene urea, or methacrylamidoethylethylene urea.



14. (Currently Amended) A process for preparing an aqueous latex dispersion, comprising the steps of:

preparing an aqueous dispersion of a sulfonated alkyd to form seed particles; and

polymerizing one or more ethylenically unsaturated monomers, in the presence of the sulfonated alkyd resin seed particles, to obtain an aqueous latex dispersion,

wherein the sulfonated alkyd resin is provided in an amount from about 2 to about ~~[[8]]~~ 15 wt. %, and wherein the one or more ethylenically unsaturated monomer is provided in an amount of from about 85 ~~[[92]]~~ to about 98 wt. %, based on the total weight of the sulfonated alkyd resin and the one or more ethylenically unsaturated monomer, and wherein the reaction mixture of said sulfonated alkyd and monomers is essentially free of added stabilizer surfactant.

wherein the average particle size of the aqueous latex dispersion obtained is from about 60 to about 140 nm.

15. (Original) The process according to claim 14, wherein the sulfonated alkyd comprises the polycondensation reaction product of: i. about 10 to about 50 weight percent of one or more of: a glycol or a polyol, ii. about 10 to about 80 weight percent of one or more of: a monobasic fatty acid, a monobasic fatty ester, a naturally occurring oil, or a partially-saponified oil, iii. about 5 to about 40 weight percent of one or more of: a di carboxylic acid or anhydride or a polycarboxylic acid or anhydride, and iv. about 5 to about 15 weight percent of one or more of: a sulfomonomer or a sulfomonomer adduct containing at least one sulfomonomer group, wherein the weight percent is based on the weight of the sulfomonomer, wherein the weight percents of (i), (ii), (iii), and (iv) are based on the total weight of (i), (ii), (iii), and (iv).

16. (Canceled)

17. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is from about 70 to about 130 nm.
18. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is less than about 140 nm.
19. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is less than about 130 nm.
20. (Original) The process according to claim 14, wherein the average particle size of the aqueous latex dispersion obtained is less than 110 nm.
21. (Original) The process according to claim 14, wherein the particle size of the sulfonated alkyd seed particles is from about 15 to about 50 nm.
22. (Original) The process according to claim 14, wherein the particle size of the sulfonated alkyd seed particles is from about 20 to about 40 nm.
23. (Canceled)
24. (Canceled)
25. (Original) The process according to claim 14, wherein the polymerizing is carried out in the presence of an initiator comprising one or more of: hydrogen peroxide, a potassium peroxydisulfate, an ammonium peroxydisulfate, dibenzoyl peroxide, lauryl peroxide, ditertiary butyl peroxide, 2,2'-azobisisobutyronitrile, t-butyl hydroperoxide, or benzoyl peroxide.
26. (Original) The process according to claim 14, wherein the one or more ethylenically unsaturated monomers comprise one or more of: styrene, .alpha.-methyl styrene, vinyl naphthalene, vinyl toluene, chloromethyl styrene, methyl

acrylate, acrylic acid, methacrylic acid, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, isobutyl acrylate, isobutyl methacrylate, ethylhexyl acrylate, ethylhexyl methacrylate, octyl acrylate, octyl methacrylate, glycidyl methacrylate, carbodiimide methacrylate, an alkyl crotonate, vinyl acetate, di-n-butyl maleate, di-octylmaleate, t-butylaminoethyl methacrylate, dimethylaminoethyl methacrylate, diethylaminoethyl methacrylate, N,N-dimethylaminopropyl methacrylamide, 2-t-butylaminoethyl methacrylate, N,N-dimethylaminoethyl acrylate, N-(2-methacryloyloxy-ethyl-)ethylene urea, or methacrylamidoethylethylene urea.

27. (Currently Amended) In a process for producing an aqueous latex dispersion via emulsion polymerization of at least one ethylenically unsaturated monomer, the improvement comprising:

carrying out the emulsion polymerization process in the presence of sulfonated alkyd seed particles provided in an amount from about 2 to about ~~[[8]]~~ 15 weight percent, and wherein the at least one ethylenically unsaturated monomer is provided in an amount of from about 85 ~~[[92]]~~ to about 98 wt. %, with respect to the total weight of the latex polymer obtained, wherein the process is carried out without use of added stabilizer surfactant wherein the average particle size of the aqueous latex dispersion obtained is from about 60 to about 140 nm.

28. (Original) The aqueous latex dispersion prepared by the process according to claim 14.

29. (Original) A coated article, prepared by applying the aqueous latex dispersion of claim 1 to an article, and drying the coating composition.

30. (Original) A coating composition, comprising the aqueous latex dispersion according to claim 1.

31. (Original) The coating composition according to claim 30, further comprising one or more fillers and/or pigments.

32. (Original) An article coated with the coating composition of claim 31.

33. (Original) The article according to claim 32, wherein the article is a member selected from the group consisting of wood, wood by-products, gypsum board, metal, plastic, concrete, a textile product, leather, and masonry.